```
=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 16:41:33 ON 11 MAY 2005
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FILE COVERS 1907 - 11 May 2005  VOL 142 ISS 20
FILE LAST UPDATED: 10 May 2005  (20050510/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 14:54:42 ON 11 MAY 2005)

     FILE 'HCAPLUS' ENTERED AT 14:54:48 ON 11 MAY 2005
L1           490 S GHOSAL S?/AU
L2            37 S L1 AND ?BENZO?
L3            11 S L2 AND ?PYRONE?
                 SELECT L3 RN 1-11

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L4            55 S E1-E55
L5               STR
L6            50 S L5

     FILE 'HCAPLUS' ENTERED AT 15:22:33 ON 11 MAY 2005

     FILE 'REGISTRY' ENTERED AT 15:24:11 ON 11 MAY 2005
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                 SAVE TEMP HEA104FUL/A L7

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     FILE 'REGISTRY' ENTERED AT 15:32:04 ON 11 MAY 2005
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L9            14 S L8  SUB=L7 SAM
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L10          298 S L8 FUL SUB=L7

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     FILE 'REGISTRY' ENTERED AT 16:08:37 ON 11 MAY 2005
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L12            0 S L11  SUB=L10 SAM
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L13             0 S L11 FUL SUB=L10
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                  SAVE TEMP L11 HEA104SUB2/Q
                  E PHOSPHOCREATINE
                  E PHOSPHOCREATINE/RN
                  E PHOSPHOCREATINE/CN
L14             1 S E3

     FILE 'HCAPLUS' ENTERED AT 16:24:22 ON 11 MAY 2005
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L16             0 S L15 AND (L14 OR PHOSPHOCREATINE)

     FILE 'REGISTRY' ENTERED AT 16:25:38 ON 11 MAY 2005

     FILE 'HCAPLUS' ENTERED AT 16:28:16 ON 11 MAY 2005
L17             0 S L15 AND CHROMOPEPTIDE?
L18             5 S L3 AND L15
L19             0 S L15 AND CHROMOPROTEIN?
L20             0 S L15 AND CHROMO(A)PEPTIDE?
L21             0 S L15 AND CHROMO(A)PROTEIN?
L22             2 S L7 AND (L14 OR PHOSPHOCREATINE)
L23             0 S L7 AND (CHROMOPEPTIDE? OR CHROMOPROTEIN? OR (CHROMO(A)(PROTEI
L24             7 S L18 OR L22

     FILE 'HCAPLUS' ENTERED AT 16:41:33 ON 11 MAY 2005

=> d stat que l7
L5                STR
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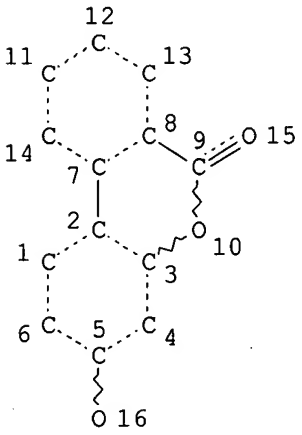


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS  16

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED  10386 ITERATIONS                      1726 ANSWERS
SEARCH TIME: 00.00.01
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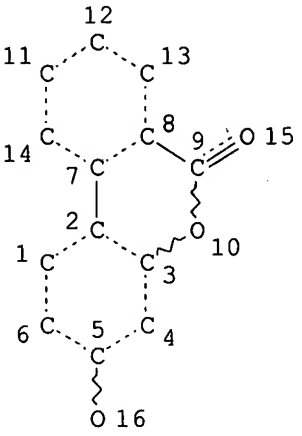
L5 STR



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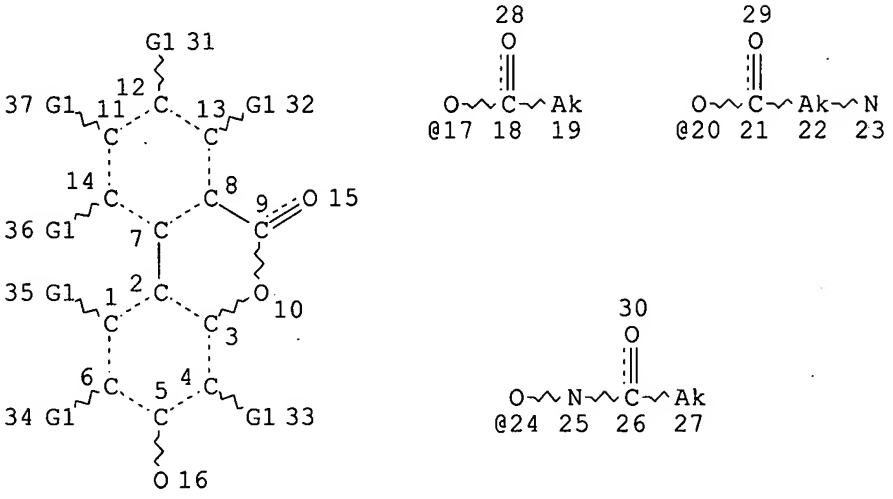
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE
L7 1726 SEA FILE=REGISTRY SSS FUL L5
L8 STR



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CONNECT IS E1 RC AT 19
CONNECT IS E2 RC AT 22
CONNECT IS E1 RC AT 27
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

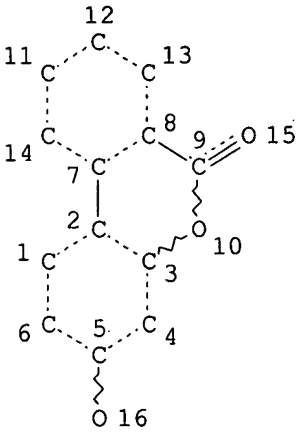
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 37

STEREO ATTRIBUTES: NONE
L10 298 SEA FILE=REGISTRY SUB=L7 SSS FUL L8

100.0% PROCESSED 1726 ITERATIONS 298 ANSWERS
SEARCH TIME: 00.00.01

=> d stat que l13
L5 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE
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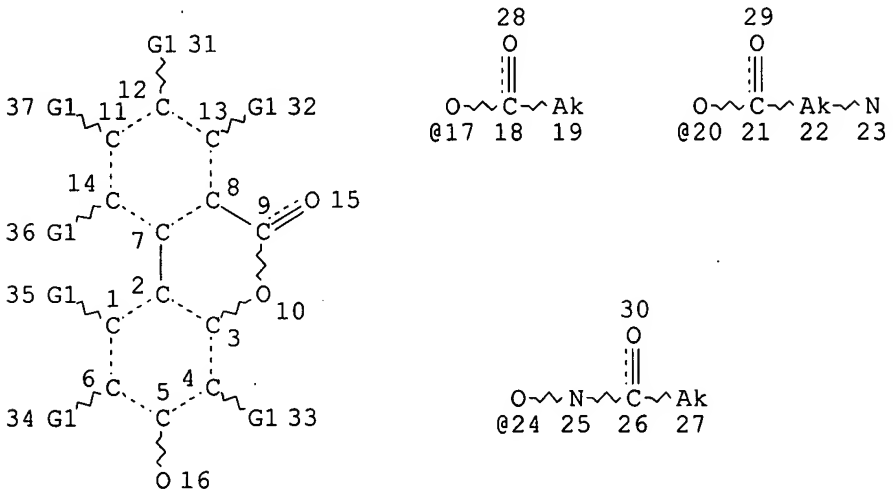
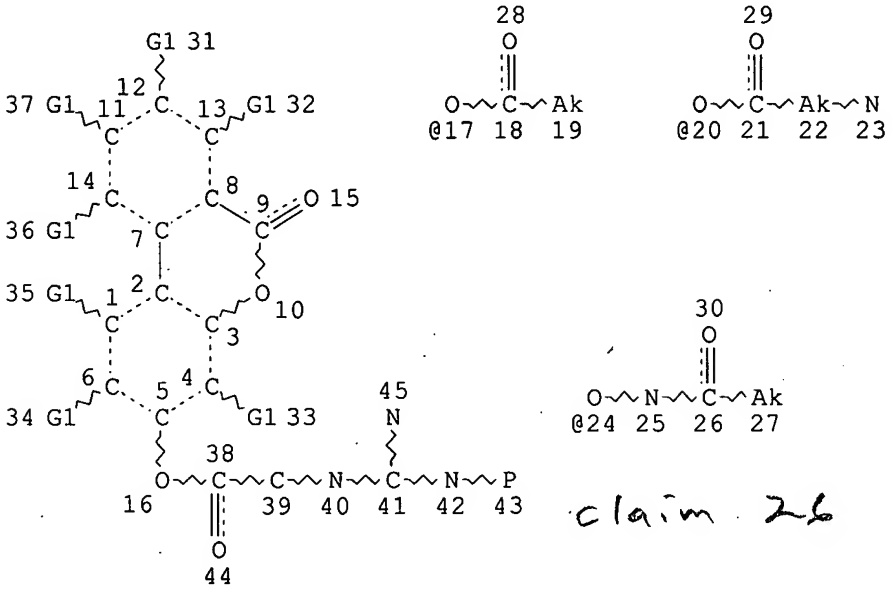
L8 STR



VAR G1=H/OH/17/20/24
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 19
CONNECT IS E2 RC AT 22
CONNECT IS E1 RC AT 27
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 37

STEREO ATTRIBUTES: NONE
L10 298 SEA FILE=REGISTRY SUB=L7 SSS FUL L8
L11 STR



claim 26

VAR G1=H/OH/17/20/24
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 19
CONNECT IS E2 RC AT 22
CONNECT IS E1 RC AT 27
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 45

STEREO ATTRIBUTES: NONE
L13 0 SEA FILE=REGISTRY SUB=L10 SSS FUL L11

No hits for claim 26

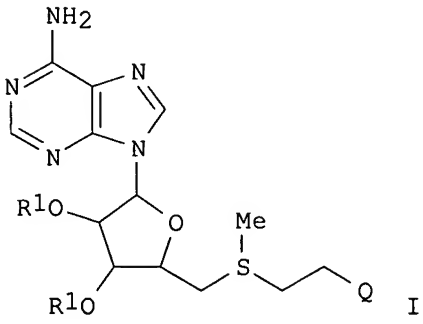
100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

=> d 124 ibib abs hitstr 1-7

L24 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:319452 HCAPLUS
DOCUMENT NUMBER: 138:314630
TITLE: Orthomolecular sulfo-adenosylmethionine derivatives with antioxidant properties
INVENTOR(S): Wilburn, Michael D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003078231	A1	20030424	US 2001-886612	20010622
PRIORITY APPLN. INFO.:			US 2001-886612	20010622

OTHER SOURCE(S): MARPAT 138:314630
GI

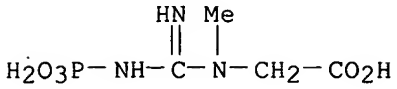


I

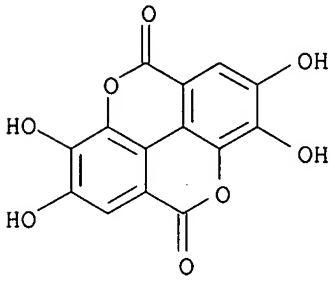
AB Disclosed are orthomol. sulfo-adenosylmethionine derivative compds., compns., and their uses for effecting a biol. activity in an animal, such as neurochem. activity; liver biol. activity; heart and artery function; cartilage, bone and joint health; stomach and/or intestinal lining resistance to ulceration; immune function; cell membrane integrity; and pain and inflammation. The compds. of the present invention are further useful for preventing or treating diseases or conditions; treating viral infections, infectious diseases, leukemia, and obesity; and reducing the risk of Sudden Infant Death Syndrome in an animal. The compds. of the present invention are I (R1 = H, C1-C10 alkyl, C2-C10 alkenyl or alkynyl, -C(O)R2; R2 = C1-C10 alkyl, C2-C10 alkenyl or alkynyl; Q = -C(NH3)C(O)AX, -C(COOH)NHX; A = O, N; X = a defined reaction product) or pharmaceutically acceptable salt, ester or solvate thereof. α-(S-adenosylmethionine)-O-tocopherol was prepared from N-Acetyl-S-benzyl-L-homocysteine, α-tocopherol, and 5'-O-p-Tolylsulfonyladenosine.

IT **67-07-2D**, **Phosphocreatine**, reaction products with S-adenosyl-L-methionine derivs. **476-66-4D**, Ellagic acid, reaction products with S-adenosyl-L-methionine derivs.
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

RN 67-07-2 HCAPLUS
CN Glycine, N-[imino(phosphonoamino)methyl]-N-methyl- (9CI) (CA INDEX NAME)



RN 476-66-4 HCAPLUS
CN [1]Benzopyrano[5,4,3-cde][1]benzopyran-5,10-dione, 2,3,7,8-tetrahydroxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



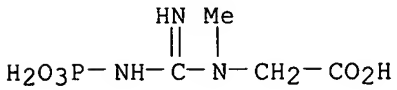
L24 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:400565 HCAPLUS
DOCUMENT NUMBER: 138:19071
TITLE: A rapid screening assay for antioxidant potential of natural and synthetic agents in vitro
AUTHOR(S): Srinivasan, Praveen; Vadhanam, Manicka V.; Arif, Jamal M.; Gupta, Ramesh C.
CORPORATE SOURCE: Department of Preventive Medicine and Environmental Health, University of Kentucky Medical Center, Lexington, KY, 40536-0305, USA
SOURCE: International Journal of Oncology (2002), 20(5), 983-986
CODEN: IJONES; ISSN: 1019-6439
PUBLISHER: International Journal of Oncology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The identification of chemopreventive agents with antioxidant potential was explored by using a Cu2+-mediated Fenton-type reaction to cause oxidative DNA damage, with lesion detection by 32P-postlabeling. Of 16 naturally occurring and synthetic compds. studied, several inhibited the formation of 8-oxo-2'-deoxyguanosine (8-oxodG), a marker of oxidative DNA lesions; ellagic acid, a polyphenol found in berries, gave maximal (>80%) inhibition of 8-oxodG formation. However, a well-known tea polyphenol, epigallocatechin gallate, along with silymarin and DL-sulforaphane, exhibited a pro-oxidant effect, with a 50-70% increase in 8-oxodG induction. In general, the results agreed with the antioxidant/pro-oxidant activities of these compds. reported in the literature, rendering this in vitro screening assay useful for rapidly and cost-effectively determining the antioxidant potential of compds.

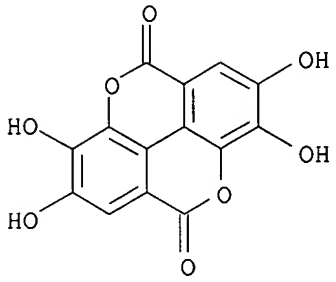
IT **67-07-2, Phosphocreatine 476-66-4,** Ellagic acid
RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(rapid screening assay of the antioxidant potential of natural and synthetic agents in vitro, including)

RN 67-07-2 HCAPLUS
CN Glycine, N-[imino(phosphonoamino)methyl]-N-methyl- (9CI) (CA INDEX NAME)



RN 476-66-4 HCAPLUS
CN [1]Benzopyrano[5,4,3-cde][1]benzopyran-5,10-dione, 2,3,7,8-tetrahydroxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

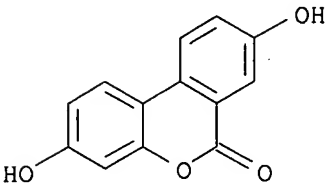
L24 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:653589 HCAPLUS
DOCUMENT NUMBER: 123:93005
TITLE: Free radicals of shilajit humus
AUTHOR(S): **Ghosal, Shibnath**; Lata, Soumya; Kumar, Yatendra
CORPORATE SOURCE: Dep. Pharm., Banaras Hindu Univ., Varanasi, 221 005, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1995), 34B(7), 591-5
CODEN: IJSBDB; ISSN: 0376-4699
PUBLISHER: Publications & Information Directorate, CSIR
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The occurrence, structure and reactions of free radicals of shilajit humus (humic acids, HAs; fulvic acids, FAs) are reported on the basis of spectroscopic analyses, chemical transformations, and synthesis. The stability of the free radicals is ascribed to chelation with iron ions and intra-mol. donor-acceptor complex formation by condensed aromatic hemiquinone-semiquinone nuclei of ferric bidentate ligand. Such resonance-stabilized species would find ecol. niche in the mineral-rich micropores of shilajit humus and would be protected from extraneous stresses for a long period of time (residence time of shilajit on mountain rocks). These soft spin free radicals acts as scavengers of nitric oxide and hydroxyl radical in solution to give ferric complexes of **dibenzo -α- pyrones**. They sequester free/loosely bound iron ions from cytosols. The biol. significance of these findings is indicated.

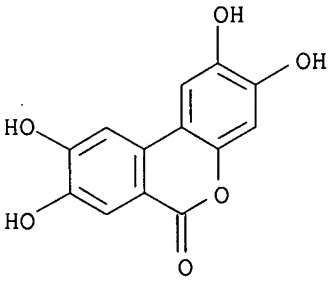
IT **1143-70-0 146776-30-9 165393-06-6**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(occurrence, structure and reactions of free radicals of shilajit humus)

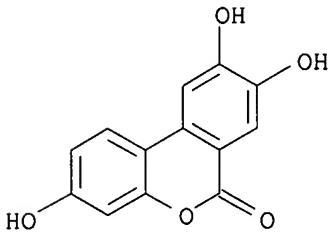
RN 1143-70-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8-dihydroxy- (9CI) (CA INDEX NAME)



RN 146776-30-9 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 2,3,8,9-tetrahydroxy- (9CI) (CA INDEX NAME)



RN 165393-06-6 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8,9-trihydroxy- (9CI) (CA INDEX NAME)



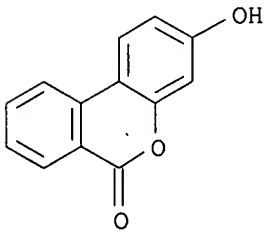
L24 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1991:639436 HCAPLUS
DOCUMENT NUMBER:	115:239436
TITLE:	The core structure of shilajit humus
AUTHOR(S):	**Ghosal, Shibnath**; Lal, Jawahar; Singh, Sushil K.
CORPORATE SOURCE:	Dep. Pharm., Banaras Hindu Univ., Varanasi, 221005, India
SOURCE:	Soil Biology & Biochemistry (1991), 23(7), 673-80 CODEN: SBIOAH; ISSN: 0038-0717
DOCUMENT TYPE:	Journal
LANGUAGE:	English

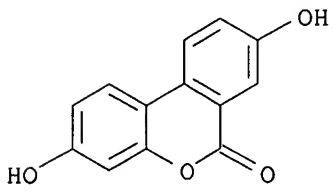
AB The nature of the building blocks and their alignments in the humus core of shilajit were determined by mild and drastic degrdns. and by comprehensive spectroscopic analyses of the products. Mild hydrolysis of humic acids (HAs) from shilajit afforded 2 new **dibenzo-α-pyrones**, viz. 3-O-palmitoyl-8-**hydroxydibenzo-α-pyrone** and 3-O-β-D-glucosyl-8- **hydroxydibenzo-α- pyrone**, and two new tirucallane-type triterpenic acids, viz. 23(Z)-3β-hydroxy-tirucalla-8,24-dien-26-oic acid and 24(Z)-3β-hydroxy-tirucalla-7,24-dien-26-oic acid. The resistant HAs (RHAs), obtained after mild hydrolysis, when subjected sep., to KMnO4 oxidation and Zn dust distillation gave several aromatic carboxylic acids, polynuclear aromatic hydrocarbons, a simple **dibenzo-α- pyrone** (= 3,4-**benzocoumarin**) and fluorene. These products, except the 2 last-named compds., have been reported from similar degrdns. of soil-sediment humus, indicating the inherent structural similarities of humus from 2 dissimilar sources. On the basis of the above and related observations, a partial structure of the shilajit humus core, involving oxygenated **dibenzo-α- pyrones**, is postulated. Addnl., the necessity of standardization of shilajit, a panacea in oriental medicine, on the basis of its active principles and carrier mols. (e.g. fulvic acids) is suggested.

IT **1139-83-9 1143-70-0 137067-98-2 137067-99-3**
RL: BIOL (Biological study)
(of Shilajit humus core)

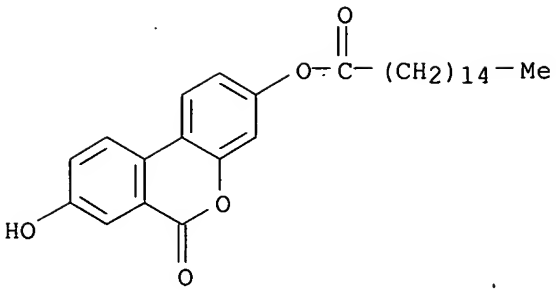
RN 1139-83-9 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3-hydroxy- (9CI) (CA INDEX NAME)



RN 1143-70-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8-dihydroxy- (9CI) (CA INDEX NAME)

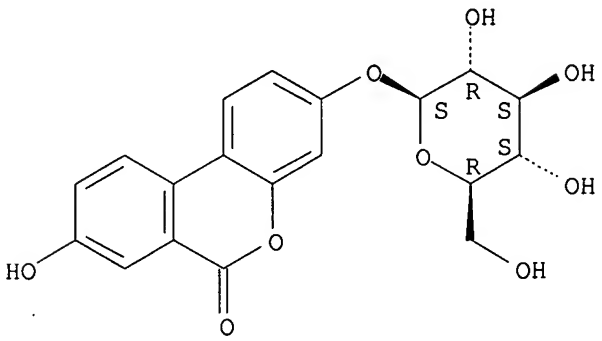


RN 137067-98-2 HCAPLUS
CN Hexadecanoic acid, 8-hydroxy-6-oxo-6H-dibenzo[b,d]pyran-3-yl ester (9CI) (CA INDEX NAME)



RN 137067-99-3 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3-(β-D-glucopyranosyloxy)-8-hydroxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

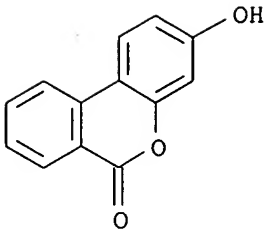


L24 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:542090 HCAPLUS
DOCUMENT NUMBER: 115:142090
TITLE: Chemistry of shilajit, an immunomodulatory Ayurvedic rasayan
AUTHOR(S): **Ghosal, Shibnath**
CORPORATE SOURCE: Dep. Pharm., Banaras Hindu Univ., Varanasi, India
SOURCE: Pure and Applied Chemistry (1990), 62(7), 1285-8
CODEN: PACHAS; ISSN: 0033-4545
DOCUMENT TYPE: Journal
LANGUAGE: English

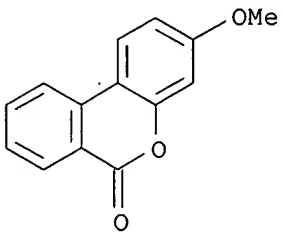
AB The chemical polemics in the reported literature on shilajit are resolved. This study shows that humification of latex and resin-bearing plants is responsible for the major organic mass (80-85%) of shilajit. The low-mol.-weight chemical markers (8-10%), viz. aucuparins, oxygenated **dibenzo-α - pyrones** and triterpenic acids of the tirucallane type (free and conjugated), occurring in the core structure of shilajit humus, are the major active constituents of Himalayan shilajit. The therapeutic effects of shilajit are the consequences of hormonal control and regulation of immunity.

IT **1139-83-9 1143-62-0 1143-70-0**
RL: BIOL (Biological study)
(of shilajit, biol. activity in relation to)

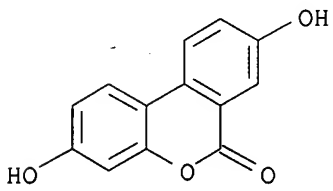
RN 1139-83-9 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3-hydroxy- (9CI) (CA INDEX NAME)



RN 1143-62-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3-methoxy- (9CI) (CA INDEX NAME)



RN 1143-70-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8-dihydroxy- (9CI) (CA INDEX NAME)

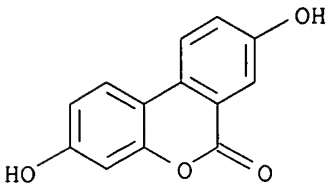


L24 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:452222 HCAPLUS
DOCUMENT NUMBER: 113:52222
TITLE: Shilajit. 5. Mast cell protecting effects of shilajit and its constituents
AUTHOR(S): **Ghosal, Shibnath**; Lal, Jawahar; Singh, Sushil K.; Dasgupta, Gautam; Bhaduri, Joydeep; Mukhopadhyay, Mita; Bhattacharya, Salil K.
CORPORATE SOURCE: Inst. Technol., Banaras Hindu Univ., Varanasi, 221005, India
SOURCE: Phytotherapy Research (1989), 3(6), 249-52
CODEN: PHYREH; ISSN: 0951-418X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of shilajit and the combined effects of its main constituents, fulvic acids (FAs), 4'-methoxy-6-carbomethoxybiphenyl (MCB) and 3,5-**dihydroxydibenzo-α- pyrone** (DDP), were studied in relation to the degranulation and disruption of mast cells by noxious stimuli. Shilajit and different combinations of FAs, MCB and DDP provided protection against antigen-induced degranulation of sensitized rat mast cells, markedly inhibited the antigen-induced spasm of sensitized guinea

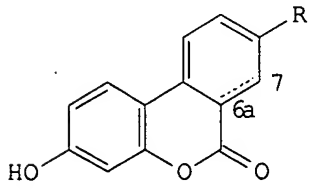
pig ileum (anaphylaxis) and prevented rat mast cell disruption by compound 48/80. The findings are appraised in view of the clin. use of shilajit in the treatment of allergic disorders in Ayurvedic medicine.

IT **1143-70-0**
RL: BIOL (Biological study)
(mast cell protection and anaphylaxis inhibition by, as shilajit component)

RN 1143-70-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8-dihydroxy- (9CI) (CA INDEX NAME)



L24 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:164804 HCAPLUS
DOCUMENT NUMBER: 112:164804
TITLE: Shilajit. Part 4. Chemistry of two bioactive **benzopyrone** metabolites
AUTHOR(S): **Ghosal, Shibnath**; Lal, Jawahar; Singh, Sushil K.; Kumar, Yatendra; Soti, Ferenc
CORPORATE SOURCE: Dep. Pharm., Banaras Hindu Univ., Varanasi, 221005, India
SOURCE: Journal of Chemical Research, Synopses (1989), (11), 350-1
CODEN: JRPSDC; ISSN: 0308-2342
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:164804
GI

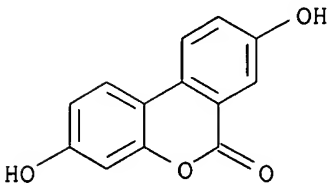


I, R=H, 6a,7-satd.
II, R=OH, 6a,7-unsatd.

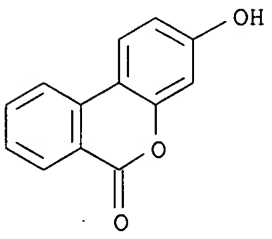
AB The reactive **benzopyrone** (I) was isolated from Shilajit (an organic exridation from steep rocks) and auto-oxidized to 3-**hydroxydibenzo -α- pyrone** and II on exposure to light and air. II was synthesized from 2-bromo-5-**methoxybenzoic** acid and resorcinol with demethylation of the resulting 3-hydroxy-8-**methoxydibenzopyrone**. Both I and II (20 mg/kg orally for 3 days) showed augmentation of swimming endurance in rats and also showed immunomodulating effects.

IT **1143-70-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and adaptogenic and immunomodulating activities of)
RN 1143-70-0 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3,8-dihydroxy- (9CI) (CA INDEX NAME)



IT **1139-83-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 1139-83-9 HCAPLUS
CN 6H-Dibenzo[b,d]pyran-6-one, 3-hydroxy- (9CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 14:54:42 ON 11 MAY 2005)

FILE 'HCAPLUS' ENTERED AT 14:54:48 ON 11 MAY 2005
L1 490 S GHOSAL S?/AU
L2 37 S L1 AND ?BENZO?
L3 11 S L2 AND ?PYRONE?
SELECT L3 RN 1-11

FILE 'REGISTRY' ENTERED AT 15:01:35 ON 11 MAY 2005
L4 55 S E1-E55
L5 STR
L6 50 S L5

FILE 'HCAPLUS' ENTERED AT 15:22:33 ON 11 MAY 2005

FILE 'REGISTRY' ENTERED AT 15:24:11 ON 11 MAY 2005
L7 1726 S L5 FUL
SAVE TEMP HEA104PAR/Q L5
SAVE TEMP HEA104FUL/A L7

FILE 'HCAPLUS' ENTERED AT 15:31:50 ON 11 MAY 2005

FILE 'REGISTRY' ENTERED AT 15:32:04 ON 11 MAY 2005
L8 STR L5

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L9          14 S L8  SUB=L7 SAM
               SAVE TEMP L8 HEA104CHI1/Q
L10        298 S L8 FUL SUB=L7

     FILE 'HCAPLUS' ENTERED AT 16:06:45 ON 11 MAY 2005

     FILE 'REGISTRY' ENTERED AT 16:08:37 ON 11 MAY 2005
L11            STR L8
L12          0 S L11  SUB=L10 SAM
L13          0 S L11 FUL SUB=L10
               SAVE TEMP L10 HEA104SUB1/A
               SAVE TEMP L11 HEA104SUB2/Q
               E PHOSPHOCREATINE
               E PHOSPHOCREATINE/RN
               E PHOSPHOCREATINE/CN
L14          1 S E3

     FILE 'HCAPLUS' ENTERED AT 16:24:22 ON 11 MAY 2005
L15         87 S L10
L16          0 S L15 AND (L14 OR PHOSPHOCREATINE)

     FILE 'REGISTRY' ENTERED AT 16:25:38 ON 11 MAY 2005

     FILE 'HCAPLUS' ENTERED AT 16:28:16 ON 11 MAY 2005
L17          0 S L15 AND CHROMOPEPTIDE?
L18          5 S L3 AND L15
L19          0 S L15 AND CHROMOPROTEIN?
L20          0 S L15 AND CHROMO(A)PEPTIDE?
L21          0 S L15 AND CHROMO(A)PROTEIN?
L22          2 S L7 AND (L14 OR PHOSPHOCREATINE)
L23          0 S L7 AND (CHROMOPEPTIDE? OR CHROMOPROTEIN? OR (CHROMO(A)(PROTEI
L24          7 S L18 OR L22

     FILE 'HCAPLUS' ENTERED AT 16:41:33 ON 11 MAY 2005
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